

In The Claims

For the convenience of the Examiner, Applicant provides the following recitation of the claims in the present application:

1. (Original) A method for regulating fluid flow in a device that conducts fluid through one or more capillary channels, comprising:

introducing fluid into a capillary channel comprising (i) a first capillary region comprising a hydrophilic surface and (ii) a second capillary region comprising a hydrophobic surface adjacent to said first capillary region, whereby fluid flows through said first capillary region to contact said hydrophobic surface.

2. (Original) The method of claim 1, wherein said device further comprises a third capillary region comprising a hydrophilic surface adjacent to said second capillary region, wherein said hydrophobic surface controls the rate of flow of said fluid into said third capillary region.

3. (Original) The method of claim 2, wherein said hydrophobic surface delays fluid flow into said third capillary region until rendered hydrophilic.

4. (Original) The method of claim 1, wherein said device comprises a plurality of capillary channels, one or more of which comprise a region comprising a hydrophobic surface.

5. (Original) The method of claim 2, wherein said device further comprises a vent.

6. (Cancelled)

7. (Original) A method for regulating fluid flow in a device that conducts fluid through one or more capillary channels, comprising:

contacting said fluid with one or more hydrophobic regions on a capillary surface that alter a rate or direction of said fluid flow within said device in comparison to a rate or direction of fluid flow within said device in the absence of said hydrophobic region.

8. (Original) The method of claim 7, further comprising contacting said fluid with a first capillary region and a second capillary region adjacent to said first capillary region, wherein a difference in capillarity of said first capillary region compared to said second capillary region alters a rate or direction of said fluid flow within said device in comparison to the rate or direction of said fluid flow within said device in the absence of said difference in capillarity.
9. (Original) The method of claim 7, further comprising contacting said fluid with a reagent dried on a surface of the device, whereby said reagent dissolves into said fluid, thereby lowering the surface tension of said fluid.
10. (Original) The method of claim 7, wherein said device comprises a plurality of capillary channels.
11. (Original) The method of claim 7, wherein one or more of said hydrophobic regions are flanked by hydrophilic regions.
12. (Original) The method of claim 7, wherein at least one of said hydrophobic regions alter the rate of flow within said device.
13. (Original) The method of claim 12 wherein said hydrophobic region(s) that alter the rate of flow within said device retard fluid flow until rendered hydrophilic.
14. (Original) A device that conducts fluid through one or more capillary channels, comprising:
a capillary channel comprising (i) a first capillary region comprising a hydrophilic surface and (ii) a second capillary region comprising a hydrophobic surface adjacent to said first capillary region.
15. (Original) The device of claim 14, wherein said device further comprises a third capillary region comprising a hydrophilic surface adjacent to said second capillary region.
16. (Original) The device of claim 14, wherein said hydrophobic surface alters a rate or direction

of fluid flow within said device.

17. (Original) The device of claim 14, further comprising a reagent dried on a surface of the device that, when dissolved into reagent dissolves into fluid within said device, lowers the surface tension of said fluid.

18. (Original) The device of claim 14, wherein said device comprises a plurality of capillary channels.

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)